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SPENCER FULLERTON BAIRD.

BY ROBERT RIDGWAY.

[Read before the Fifth Meeting of the American Ornithologists' Union.]

MR. PRESIDENT AND MEMBERS OF THE AMERICAN ORNITHOLOGISTS' UNION:—When asked by the worthy President of our Union to prepare a memorial address upon the life and services to ornithology of our great teacher and leader, Professor Baird, it was with many misgivings that the invitation with which I was thus honored was accepted; for, glad as I am to render what tribute I can to the revered memory of a departed and beloved friend, the sense of my own inability to do justice to such a subject has almost deterred me from the attempt.

The preparation of an address which shall consist essentially of new matter is rendered particularly difficult by the circumstance that there has already been published by Professor G. Brown Goode in Bulletin 20 of the United States National Museum * an excellent biography of Professor Baird, giving in

* Department of the Interior: | U. S. National Museum. |—23—| Bulletin | of the United States National Museum. | No. 20. |—| Published under the direction of the Smithsonian Institution. |—| Washington: | Government Printing Office. | 1883. |

Comprising—

Bibliographies of American Naturalists. | I. | The Published Writings | of | Spencer Fullerton Baird, | 1843-1882. | By | George Brown Goode, | Assistant Director of the National Museum. | Washington: | Government Printing Office, | 1883. |

An octavo volume of 377 pages, + pages i-xvi (title pages, Prefatory Note, Biographical Sketch, etc.).

detail a history of the principal events and chief results of his life, together with a complete bibliography of his publications. Since the present memoir is intended to deal more particularly with Professor Baird as an ornithologist, the reader is referred for more general information to Professor Goode's admirable 'Biographical Sketch,'* from which are taken most of the chronological data and the occasional quotations in the following prelude to what I have to offer from my own personal knowledge of the life, labors, attainments, and personal qualities of one who in history must hold a place at the head of American naturalists, and in the hearts of those who knew him a place which none other can fill.

Spencer Fullerton Baird was born in Reading, Pennsylvania, February 2, 1823. In 1834 he was sent to a Quaker boarding school at Port Deposit, Maryland, and the following year to the Reading Grammar School. In 1837 he entered Dickinson College, graduating in 1840, at the age of seventeen. The next several years were spent in making natural history studies, and in the study of medicine, including a winter's course of lectures at the College of Physicians and Surgeons, in New York, in 1842, though he never formally completed his medical course. "In 1845 he was chosen professor of natural history in Dickinson College, and in 1846 his duties and emoluments were increased by election to the chair of natural history and chemistry in the same institution. . . . July 5, 1850, he accepted the position of Assistant Secretary of the Smithsonian Institution, and October 3, at the age of twenty-seven years, he entered upon his life work in connection with that foundation—"the increase and diffusion of knowledge among men."

Mr. Goode informs us that "his ancestry upon one side was English, upon the other Scotch and German. His paternal grandfather was Samuel Baird, of Pottstown, Pa., a surveyor by profession, whose wife was Rebecca Potts." The Bairds were from Scotland, while the Potts family came from England to Pennsylvania at the close of the seventeenth century. "His great

* Forming a special chapter of the work before cited, and divided into nine distinct sections, as follows: I. Outline of his public career. II. Honors and dignities. III. Ancestry and development of character. IV. Early friendships and their influences. V. Analysis of his work and the results. VI. Contributions to science and scientific literature. VII. Educational and administrative works. VIII. Work as Commissioner of Fisheries. IX. Epilogue.

grandfather on the mother's side was the Rev. Elihu Spencer of Trenton, one of the war preachers of the Revolution, whose patriotic eloquence was so influential that a price was set on his head by the British government; his daughter married William M. Biddle, a banker, of an English family for many generations established in Pennsylvania, and identified with the banking interests of Philadelphia. Samuel Baird, the father of the subject of this sketch, established himself as a lawyer at Reading, Pennsylvania, and died when his son was ten years old. He was a man of fine culture, a strong thinker, a close observer, and a lover of nature and out-of-door pursuits. His traits were inherited by his children, especially by his sons Spencer and William. The latter, who was the elder, was the first to begin collecting specimens, and as early as 1836 had in hand a collection of the game-birds of Cumberland County. His brother soon became his companion in this pursuit, and six years later they published conjointly a paper entitled 'Descriptions of two species, supposed to be new, of the Genus *Tyrannula* Swainson, found in Cumberland County, Pennsylvania.' " *

Early in 1838 Professor Baird became acquainted with Audubon, "with whom he was for many years in correspondence, and who, in 1842, gave to him the greater part of his collection of birds, including most of his types of new species." In 1841 a very intimate friendship was begun with George N. Lawrence of New York, with John Cassin of Philadelphia, in 1843, and Thomas M. Brewer of Boston, in 1845. These close friendships continued through life, though of these ornithologists only the first named survives him, the others having died before Professor Baird. They were all at one time or another associated with him in his ornithological work.

Although his elder brother had anticipated him by a few years in beginning the formation of a collection, he soon "diverged into other paths," and became a lawyer in Reading, Pa., † leaving to him the field of ornithology, which he cultivated so assiduously that when the catalogue of his collection ‡ was closed, at

* These species are now known as *Empidonax flaviventris* Baird and *E. minimus* Baird.

† Mr. Goode informs us that "at the time of his death, in 1872," he "was United States collector of internal revenue at Reading."

‡ This catalogue now constitutes Volume I of the series of National Museum 'Register of Specimens,' now filling twenty-one volumes, and containing more than 112,000 separate entries.

number 3696, almost every species of bird occurring, regularly or otherwise, in eastern and central Pennsylvania was represented, and in most cases by series of specimens showing the different stages and phases of plumage. This collection, deposited there by Professor Baird when he entered upon his duties as Assistant Secretary of the Smithsonian Institution, is still in the National Museum, of whose ornithological treasures it forms an important element, so many of its specimens having served as the types of Professor Baird's descriptions in his 'Birds of North America' and subsequent works. In it are "specimens of birds prepared by these boys forty-five [now nearly fifty] years ago by a simple process of evisceration, followed by stuffing the body-cavities full of cotton and arsenical soap,"—a method probably adopted by them before they had learned the art of skinning birds.

Although his collection was made at a time when the art of taxidermy is generally supposed to have been far behind its present status, especially so far as this country is concerned, the excellent preparation of the specimens, their very precise labelling and perfect preservation, show Professor Baird to have been in every respect the peer of any ornithological collector of the present period. Exposed for more than thirty years to constant handling and everything that could effect their deterioration, they are still in a most excellent state of preservation, and none have lost their labels. I have never known a specimen of Professor Baird's preparation to be attacked by insects, a statement which I am able to make regarding few other collections of which I possess the knowledge to speak. The force of these observations may be better appreciated when it is considered that probably no other collection of skins has ever received so much handling as that made by Professor Baird, every standard work on North American birds published since 1850 having been based essentially upon it, so far as eastern species are concerned. Not only are the specimens prepared and preserved in a manner equalled by only the best of our living collectors, but their labels are fastened with unusual security, and contain very precise data, including scientific name (with authority), sex, age, locality, and date; and, usually, on the reverse side, the total length and stretch of wings, measured before skinning.

The formation of so large and varied a collection of course involved such a vast amount of field work as to remove Professor Baird from the *limbo* of so-called 'closet-naturalists.' How

pleasant and instructive to him must have been his out-of-door studies of birds, may be inferred from the extent of his excursions, which are thus described by Mr. Goode :

“In 1841, at the age of eighteen, we find him making an ornithological excursion through the mountains of Pennsylvania, walking four hundred miles in twenty-one days, the last day sixty miles between daylight and rest.* The following year he walked more than 2,200 miles. His fine physique and consequent capacity for work are doubtless due in part to his out-door life during these years.”

Considering Professor Baird's great interest in the study of birds, the number of his ornithological publications is astonishingly small, amounting to only seventy-nine different titles (see Mr. Goode's Bibliography, pp. 250-253). It is, therefore, strikingly evident that his publications must have possessed unusual merit to earn for him so great a reputation as an ornithologist. This reputation was indeed established by the first of his separate works, usually known and quoted as 'The Birds of North America,' though not published under this title until two years after its publication by the Government as Volume IX of the 'Report of Explorations and Surveys, to ascertain the most practicable and economical route for a Railroad from the Mississippi River to the Pacific Ocean.' With the publication, in 1858, of this great quarto volume of more than one thousand pages, began what my distinguished colleague, Professor Coues, has fitly termed the 'Bairdian Period' of American ornithology—a period covering almost thirty years, and characterized by an activity of ornithological research and rapidity of advancement without a parallel in the history of the science. Referring to this great work, in his 'Bibliographical Appendix' to 'Birds of the Colorado Valley' (page 650), Professor Coues says: "It represents the most important single step ever taken in the progress of American ornithology in all that relates to the technicalities. The nomenclature is entirely remodelled from that of the immediately preceding Audubonian period, and for the first time brought abreast of the then existing aspect of the case. . . . The synonymy of the work is more extensive and elaborate and more reliable than any before presented; the compilation was almost entirely original,

*Professor Baird informed the writer that he had once, in a pedestrian contest, walked forty miles in eight consecutive hours.

very few citations having been made at second-hand, and these being indicated by quotation marks. The general text consists of diagnoses or descriptions of each species, with extended and elaborate criticisms, comparisons, and commentary. . . . The appearance of so great a work, from the hands of a most methodical, learned, and sagacious naturalist, aided by two of the leading ornithologists of America [John Cassin and George N. Lawrence], exerted an influence perhaps stronger and more widely felt than that of any of its predecessors, Audubon's and Wilson's not excepted, and marked an epoch in the history of American ornithology. The synonymy and specific characters, original in this work, have been used again and again by subsequent writers, with various modifications and abridgment, and are in fact a large basis of the technical portion of the subsequent 'History of North American Birds' by Baird, Brewer, and Ridgway. Such a monument of original research is likely to remain for an indefinite period a source of inspiration to lesser writers, while its authority as a work of reference will always endure."

Thus are graphically described the distinctive features of what Mr. Leonhard Stejneger has truthfully termed the Bairdian School* of ornithology, a school strikingly characterized by peculiar exactness in dealing with facts, conciseness in expressing deductions, and careful analysis of the subject in its various bearings—methods so radically different from those of the older 'European School' that, as the esteemed member whom we have just named has already remarked,† conclusions or arguments can be traced back to their source and thus properly weighed, whereas the latter affords no basis for analysis. In other words, as Mr. Stejneger has, in substance, said, the European School requires the investigator to accept an author's statements and conclusions on his personal responsibility alone, while the Bairdian furnishes him with tangible facts from which to take his deductions.

The dominant sources of Professor Baird's training in systematic ornithology are not difficult to trace; in fact, the bases of his classifications are so fully explained or frequently mentioned in his various works as to leave nothing to mere inference. He studied carefully the more advanced systems of his time, and with unerring instinct selected from them their best features,

* Proc. U. S. Nat. Mus., Vol. VII, 1884, p. 76.

† *Ibid.*, p. 77.

and combined them, together with original ideas, into a classification which was an improvement on its predecessors. Thus, the classification presented in the 'Birds of North America' (1858) is based essentially upon the systems of Sundevall ('Ornithologiskt System,' 1835 and 1843), Cabanis ('Ornithologische Notizen,' 1847), and Keyserling and Blasius ('Wirbelthiere Europas,' 1840). The nomenclature was fixed by methods adopted from G. R. Gray ('List of the Genera of Birds,' etc., 1841-42), to the abandonment of which must be attributed most of the subsequent changes in generic names. In the 'Review' (1864-66) and 'History of North American Birds' (1874), a further concession is made to the classifications of Sundevall and Cabanis by commencing with the Order Passeres and Family Turdidæ instead of the Raptores. The same systems were the foundation of Liljeborg's 'Classification of Birds,' formally adopted by the Smithsonian Institution (through Professor Baird) in 1866, by Messrs. Sclater and Salvin (with certain emendations and amplifications) in 1873, and with still further modifications by the American Ornithologists' Union, in 1886.

The distinctive features of the 'Bairdian School' were still further developed by the publication, in 1864-66, of the 'Review of American Birds,' a work of unequalled merit, displaying in their perfection Professor Baird's wonderful powers of analysis and synthesis, so strongly combined in his treatment of difficult problems. Unfortunately for ornithology, this work was but fairly begun, only a single volume (an octavo of 450 pages) being published. The cause of its discontinuance is not definitely known to the present writer, but it may have been the intervention of the 'Ornithology of California,'* a work based on the manuscript notes of Dr. J. G. Cooper, but edited by Professor Baird, who also superintended its publication, and the 'History of North American Birds,'† material for which was already being

* Geological Survey of California. | J. D. Whitney, State Geologist. | — | Ornithology. | Volume I. | Land Birds. | Edited by S. F. Baird, | from the manuscript and notes of | J. G. Cooper. | Published by authority of the Legislature. | 1870. |

A royal octavo volume of 592 pages, illustrated by numerous woodcuts, some colored by hand.

† A | History | of North American Birds | by | S. F. Baird, T. M. Brewer, and R. Ridgway | Land Birds | Illustrated by 64 colored plates and 593 woodcuts | volume I. | [III]. | [Vignette.] | Boston | Little, Brown, and Company | 1874. | 3 vols., small quarto, vol. I. pp. i-xxviii, 1-596, i-vi, cuts, and pll. i-xxvi, Vol. II, 3 pll. pp. 1-590, i-vi, cuts, and pll. xvii-lvi, Vol. III, 3 pll., pp. 1-560, 1 l., i-xxviii, cuts, and pll. lvii-lxix.

arranged, besides other literary work and the increasing pressure of administrative duties. Whatever the cause, however, its discontinuance is to be regretted, since its completion would have given us an invaluable guide to the study of Neotropical birds. I have it on good authority, that no single work on American ornithology has made so profound an impression on European ornithologists as Professor Baird's 'Review'; and, by the same authority, I am permitted to state that he—a European by birth and rearing—became an American citizen through its influence.

In the preface to the present writer's latest work on American ornithology* the author is proud to mention that the book was "originally projected by Professor Spencer F. Baird . . . whose works represent the highest type of systematic ornithology and have furnished the model from which the younger generation of ornithologists have drawn their inspiration"; and that his friendly advice and suggestions had rendered comparatively easy the performance of a task which under less favorable auspices would have been far more difficult of accomplishment—acknowledgments which but faintly express the author's obligations to his tutor.

In commenting upon the value of Professor Baird's contributions to scientific literature, Professor Goode remarks that "no

* A Manual of North American Birds. By Robert Ridgway. — Illustrated by 464 outline drawings of the generic characters. — Philadelphia: J. B. Lippincott Company. 1887. Royal octavo. Frontispiece (portrait of Professor Baird), pp. i-xi, 1-631, pl. i-cxxiv.

The history of this work, briefly stated, is as follows:

Before the printing of the 'History of North American Birds' had been completed, Professor Baird had under way a smaller but very useful work, consisting of the analytical or synoptical tables of the larger work, improved and somewhat enlarged by the introduction of brief diagnoses of the nests and eggs of the different species, together with the English names. This book, of which there exists only a single copy, and that not perfect, was completed early in 1874. Its title is 'Outlines of American Ornithology by S. F. Baird and R. Ridgway. Part I. Land Birds.' For some reason the work was never published, and the electrotype plates were destroyed. This work, in which the present writer had some share, was the embryo which, after twelve years' incubation, finally developed into the more comprehensive 'Manual of North American Birds,' in the preparation of which, however, Professor Baird took no active part, though it is scarcely necessary to say that he was much interested in its progress, even almost to the close of his life, which ended shortly after the work had been printed, but before it could be published. It has been a matter of deep regret to the author, that Professor Baird could not have had a share in the preparation of the book, and still more that he could not have lived to enjoy the satisfaction of seeing it published.

one not living in the present can form an accurate idea of the personal influence of a leader upon his associates and upon the progress of thought in his special department, nor can such an influence as this well be set down in words. This influence is apparently due not only to extraordinary skill in organization, to great power of application and concentration of thought constantly applied, and to a philosophical and comprehensive mind, but to an entire and self-sacrificing devotion to the interests of his own work and that of others."

But it is not only through his published works and personal influence with his associates and pupils, that Professor Baird was powerful in the development and advancement of ornithology in America. His position as head of the Smithsonian Institution and the National Museum gave him peculiar opportunities for putting into practical shape his plans for a thorough exploration of little known portions of the continent. "To his influence with the Government authorities is due the excellent field-work done in connection with nearly all the Government Surveys and the Signal Service Bureau, from the first inception of the various Pacific Railroad Surveys to the present time."* If the exploration of a particular field suggested itself to him, he rarely failed to find, sooner or later, means to accomplish the object in view; no opportunity for making use of, or securing the coöperation of, other departments of the Government in maintaining explorations which he had himself instigated or organized was ever neglected, and for such opportunities he was constantly alert. His success in thus promoting the cause of science was, however, by no means wholly due to the importance of his official positions, his personal zeal and influence often accomplishing what might not otherwise have been successful.

The sterling qualities of mind and heart which were so conspicuous in Professor Baird's character were as well known and as highly appreciated abroad as at home. As an illustration of this fact, I quote the following obituary notice in '*Nature*,' for August 25, by Mr. R. Bowdler Sharpe, Senior Assistant, Department of Zoölogy, in the British Museum, well known as an ornithologist of eminence:

"By Englishmen who knew Professor Baird personally, the loss must be especially felt, but there are many who never had met

* Editorial, in '*The Auk*,' Oct. 1887, p. 358.

him in the flesh, to whom the news of his decease must come as that of a dear friend. As one of the latter class we venture to express our sympathy with our scientific brethren in America on the decease of one of their most eminent and respected colleagues. As chief of the Smithsonian Institution, Professor Baird possessed a power of conferring benefits on the world of science exercised by few directors of public museums, and the manner in which he utilized these powers has resulted not only in the wonderful success of the United States National Museum under his direction, but in the enrichment of many other museums which were in friendly intercourse with the Smithsonian Institution. We know by experience that the British Museum is indebted beyond measure to Professor Baird, and we need only refer to the recent volumes of the 'Catalogue of Birds' to show how much our National Museum owes to the sister Museum in America for hearty co-operation. We had only to write and express our wants, and immediately every effort was made, by Professor Baird's instructions, to supply all the desiderata in our ornithological collection, and this without the slightest demand for an equivalent exchange, though, of course, in the case of the British Museum, every effort was made to reciprocate the good feeling shown by the great American Museum. There must be many private collectors in this country who will indorse our acknowledgments to Professor Baird for the unrivalled liberality which he has always shown in the advancement of the studies of every ornithologist who invoked his aid. . . . We may add that, during an experience of twenty years, we have never heard from any ornithologist, European or American, a single unkind word concerning Professor Baird, either in his public or private capacity. This is something to say in this age of jealousies and backbitings."

Indeed, it may with truth be said that so widespread, so nearly universal, has been his influence, that few there are, if any, among his contemporaries who have not had occasion to record their sense of obligation for his aid, his counsel, or his noble example. We all delight to acknowledge him our great teacher, and in doing so do honor to ourselves.

A very marked trait of Professor Baird's character was his aversion to personal controversy, which was so decided that under no circumstances could he be drawn into one. It was his inviolable rule to answer his critics by a dignified silence, no matter

how great the provocation to reply, or how strong a case his side presented; and in every instance known to the writer it has transpired that the ground taken or the statements made by Professor Baird have stood the test of time. "One of his striking characteristics was that he would never quarrel and never have anything to do with the quarrels of others. He was always for peace." *

As a public officer, no man was more conscientiously devoted to his duty or faithful in its performance; and he administered the complicated affairs of three distinct and important establishments with an ability which commanded admiration, although it was plainly to be seen that the responsibilities were too great for any single person to bear. His capacity for work was enormous, and he was constantly occupied. He enjoyed work, and it was not his industry which hurt him; but the harassing cares of his public trusts and the weight of their responsibility were too much for even his powerful physique to endure, and he gave way under the strain.

No man was more easily approached than Professor Baird, or greeted a new acquaintance more cordially. His reception of young persons, especially those with an inclination for natural history, was particularly charming, at once relieving them from embarrassment and captivating them by his unassuming manners, his genialty, and frankness.

Trusting that he does not introduce too prominently his own personality into this memoir, the writer offers the following brief outline of his personal acquaintance with Professor Baird, as being of probable interest to members of the Union, and as giving an insight into the character of his lamented friend.

Until near the middle of the year 1864, the writer, then a lad in his fourteenth year, was unacquainted with the name of any living naturalist, or with any books on natural history except such general or superficial compilations as Goldsmith's 'Animated Nature,' a history of the United States (author forgotten) which included a chapter or two on the natural history, and Goodrich's 'Animal Kingdom'—works which, although supplying much valuable information to the general reader, were of course wholly inadequate to the wants of a special student. A lady resident in the town learned of his difficulties, and sug-

* Professor Otis T. Mason, in 'Washington Evening Star' of August 20.

gested that by writing to the Commissioner of Patents in Washington he might be able to obtain the correct names of birds, supplementing her fortunate suggestion by the gift of an envelope bearing the printed address of a former Commissioner of Patents. A letter was written, and with it was enclosed a colored drawing, life size, of a pair of Purple Finches ("Roseate Grosbeak, *Loxia rosea*," of the incipient ornithologist) perched upon a dry stalk of the great ragweed (*Ambrosia trifida*), the seeds of which in winter constitute the principal food of the bird in that locality. An answer was awaited with great impatience, but in due time was received, the following being an exact copy:

"No. 5664.

SMITHSONIAN INSTITUTION,

Washington, D. C., June 23, 1864.

"DEAR SIR:

"The present Commissioner of Patents (Mr. Holloway, not Mr. Bishop), has sent me your letter, as more conversant with the subject of North American Birds than himself. I have read it with interest and much pleasure, as showing an unusual degree of ability as an artist, and of intelligent attention to a scientific subject. I had no difficulty in recognizing the bird you sent, and was much pleased to see that you had given all the essential features of form and color with much accuracy.

"The bird is the Purple Finch (*Carpodacus purpureus*). I send you a catalogue of the birds of North America, and some other pamphlets.* If you can procure the 9th volume of the Pacific Railroad Reports, you will find descriptions of all the North American birds, by myself.

"I will be glad to hear from you and to render you any aid by naming your drawings, or in any other way. You must learn the scientific names of the birds, and thus be able to talk and write about them with persons not knowing the English names used in your part of the country.

"Let me know what kind of eggs you have.

"Very truly yours,

(Signed) "SPENCER F. BAIRD.

"Asst. Sec. S. I."

"ROBERT RIDGWAY,

"Mt. Carmel,

"Illinois."

The above letter was a revelation to the recipient, who, in his isolation, was ignorant of the existence of any one but himself engaged in the study of birds. He had read of Audubon and

*These were the various circulars of instruction for collecting and preserving specimens of natural history, published by the Smithsonian Institution, and well known to naturalists in this country.

Wilson, and Nuttall, and Bonaparte, but these he knew were all dead. The profound impression produced by the letter and the hope that it gave, may be imagined. From this commencement arose a correspondence which to the present writer was a constant source of delight and instruction, and to which he looks back with feelings that cannot be expressed. It was not until the early part of 1867, nearly three years later, that the writer obtained a copy of the text of 'Birds of North America' (Volume IX, Pacific R. R. Report), and it therefore became necessary for him to continue the sending of drawings and descriptions in order to obtain the much desired identifications. In replying to the writer's numerous letters of this character, Professor Baird always wrote most kindly and encouragingly, replying to multitudinous queries as fully as the arduous duties of his official position would allow. To mention all the useful hints which he gave would require too much space here, but the following are selected as samples:

"I would advise you to spend most of your leisure time in practising drawing of birds and mammals from nature and from life, so as to acquire a facility in seizing a temporary attitude and transferring it to paper. Make these sketches continually whenever you have the opportunity, so as to secure the more practice. A certain number of these drawings you may work up in their minutest details, and it will be a good exercise to draw the feathers of a single wing, as well as bill, feet, etc., and skulls of mammals. The object should be in drawing form to secure artistic elegance and at the same time a minute, almost microscopic, accuracy in matters of detail, as far as they can be represented.

"The drawings you have sent are too fragmentary to show what your present abilities as an artist are, and I would rather see some full-sized figures . . ."

"It will not be necessary to spend much time in practising coloring, as this is rather a mechanical work, easily acquired by practice. The first object should be to obtain the highest perfection in drawing the form and in filling out minute details." (From a letter dated December 24, 1865.)

In a letter dated January 13, 1867, he gave this valuable advice as to writing field-notes: "Let me give you one hint in regard to making notes on the specimens. *Never write on both sides*

of the same leaf. In this way it will be possible to cut apart your notes into slips and assort with others of same purport, so as to rearrange systematically. Do this for your own notes as well as those you send me: You will often realize the advantage of so doing."

It is unnecessary here to go into details concerning events subsequent to the beginning of this correspondence. Suffice it to say that in all his relations with Professor Baird the writer remembers, with deepest gratitude and reverence, his uniform great kindness of heart, his genial manners, his wise counsels, and his steadfast friendship; and, with others who were so fortunate as to have enjoyed the privilege of his acquaintance, he mourns a departed friend and teacher, whose loss is irreparable.



UPPER MISSOURI RIVER BIRDS.

BY ROBERT S. WILLIAMS.

IT is a bright morning on the 9th of May, and, with gun and game bag, I start out for a walk along the Missouri River above town (Great Falls, Montana). The wind, which has been blowing almost a gale for several days past, is this morning scarcely perceptible; a few fleecy clouds are in the clear sky above, and the prairies are rapidly changing their dull colors to summer tints of green. At a distance, the scattered cotton-woods stand up as bare and gray as in the depth of winter, and the willows scarcely show signs of returning life, except in the warm, sunny nooks, where they are rapidly assuming the misty green that will shortly envelop them and change their whole appearance.

On all sides the birds are doing their best to proclaim the arrival of another spring. In the distance are heard the loud and long-drawn out whistlings of the Curlew as he wings his way here and there over the prairie. Close at hand are Chestnut-collared and McCown's Longspurs uttering their pleasing warbles. The latter bird is constantly flying rapidly upward for a short distance, then with wings motionless above the back, it sails slowly to the ground, reminding one of a huge butterfly,